2.2.3.2 Northwest Lowlands Ecological Landscape

General Description

The Northwest Lowlands Ecological Landscape forms a triangular wedge in northwestern Wisconsin (Figure 2-6), bounded on the north by the Superior Coastal Plain and on the south and east by the Northwest Sands. The major landforms are ground and end moraines, with drumlins present in the southwestern portion. Topography is gently undulating. Bedrock outcroppings are rare except in association with the basalt ridge that follows the Douglas County fault line and forms part of the northern boundary of the Northwest Lowlands. Maximum local relief is approximately 350'. Waterfalls, cliffs, exposed bedrock glades, and rock-walled gorges are associated with the bedrock features. Local exposures of sandstones and/or conglomerates occur in some of these gorges. Soils are predominantly loams, with significant acreages of peat deposits in the poorly drained lowlands. Significant portions of this Ecological Landscape extend westward into the state of Minnesota.

Figure 2-6. Northwest Lowlands Ecological Landscape.

Vegetation

The historic upland vegetation of this Ecological Landscape was almost entirely forest, composed mostly of paper birch, fir, sugar maple, aspen, and white spruce, with some white and red pine on the drier ridges. The lowlands supported extensive wet forests of black spruce and tamarack, and some white cedar and black ash swamps. The notes made by US General Land Office surveyors during the mid-nineteenth century indicate that overall tree densities were high in this Ecological Landscape; also, the witnessed trees included many large individuals. The Ecological Landscape at that time was likely a mosaic of young, recently disturbed forests interspersed with patches of old-growth forests.

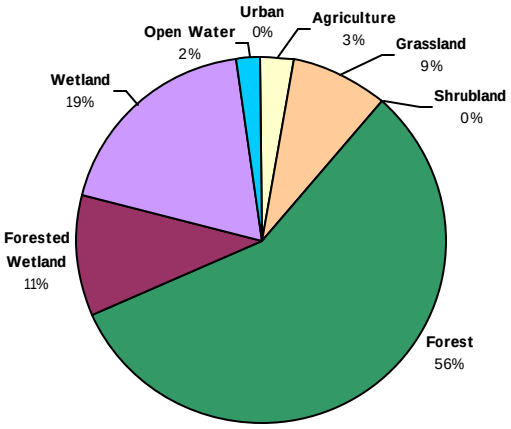

Figure 2-7. Current land cover in the Northwest Lowlands Ecological Landscape.

The present-day forests remain extensive and relatively unbroken, occupying about 67% of the Ecological Landscape (Figure 2-7). Forests consists mainly of aspen, paper birch, sugar maple, basswood, spruce, and fir. Minor amounts of white and red pine and red oak are also present. Older successional stages are currently rare. The large undisturbed peatland complexes are composed of mosaics of black spruce-tamarack swamp, muskeg, open bog, poor fen, shrub swamp, and white cedar swamp. Among the important sensitive species occurring here are the timber wolf, moose, gray jay, lesser purple fritillary, subarctic darner, and bog bluegrass. Many birds and invertebrates with generally boreal ranges are found here. Road density is notably low in the western part of the Ecological Landscape.

Hydrologic Features

This heavily forested Ecological Landscape occupies a major drainage divide, and contains the headwaters of many streams flowing north toward Lake Superior or south toward the St. Croix River system. Among the important rivers are the St. Croix, Black, Tamarack, Spruce, and Amnicon. Lakes are uncommon, and are typically associated with peatland complexes. Rare aquatic species include the river redhorse, gilt darter, and several dragonflies and damselflies. Water quality is relatively good in this area with the third best ranking for overall watershed pollution levels according to Wisconsin DNR.

Land Use

The total land area for the Northwest Lowlands Ecological Landscape is approximately 421,000 acres, of which 74% is classified as timberland. About half of the Ecological Landscape is in public ownership (Figure 2-8), which is mostly managed as county forests; a small portion is also under federal or state management.

Socioeconomics

Socioeconomic data are summarized based on county-level approximations of the Ecological Landscape (referred to as a "region"). Economic data are available only on a political unit basis, with counties as the smallest unit. This Ecological Landscape is very small, and the only county included in the socioeconomic region is Douglas County ("Northwest Lowlands Region"). The City of Superior is in Douglas County, but not within the Northwest Lowlands Ecological Landscape. This may cause some discrepancies when analyzing the socioeconomic structure of the Ecological Landscape; however, the social and economic character of the area is expected to be significantly affected by its close proximity to Superior and Duluth, Minnesota.

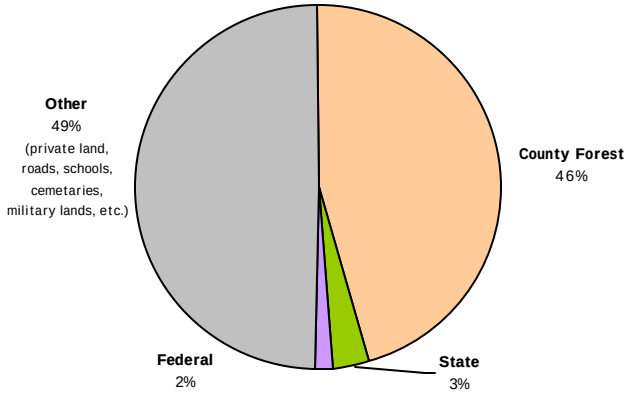

Figure 2-8. Public land ownership in the Northwest Lowlands Ecological Landscape.

The forest products and processing industries are not a major contributor to the economy of the Northwest Lowlands Region (4% of total industrial output); however, this may be due to the influence of the City of Superior on economic measures for Douglas County. The area is heavily forested, and mostly managed by County Forests for wood products. Agriculture is not a major contributor to the economy of the region. The region has the second lowest percent land area in farmland, the lowest market value per acre of products sold, the second lowest milk production per acre, and the third lowest per acre production of corn. Note that farmland includes all land under farm ownership such as cropland, pastureland, and woodland.

The region also has one of the highest percentages of agricultural land sold and diverted to other uses. The number of state parks, forests, and recreation areas, as well as fishery and wildlife areas, are second fewest among the regions. As with farmland, an above average amount of forest land is sold and diverted to other uses in this region. This region has the highest combined percentage of agricultural and forest land sold annually.

Compared to the other regions, the Northwest Lowlands Region is sparsely populated and relatively poor. The population density of the region (32 persons/mi^2) is about one third that of the state as a whole (96 persons/mi^2). It has the lowest population density and the second lowest growth rate (1970-2000) among the regions of the state. Note that the population density of the Northwest Lowlands Region is low, however, the population density of the Ecological Landscape alone would be even lower, since the City of Superior is included in the region, but not in the Ecological Landscape. The population has a very low percentage of young people (less than 18 years old) and is not racially diverse. It has an above average percentage of high school graduates. Although the per capita income is below average, Douglas County has the fourth highest average wage among the regions, and one of the lowest poverty rates for both adults and children.

The largest sector of the Douglas County economy is transportation, communication, and public utilities, which contribute 23% of total industrial output. As for job diversity, this region has the lowest percentage of manufacturing employment and the third lowest proportion of farming jobs. Government service is relatively more important here as a provider of jobs.

Management Opportunities

- This Ecological Landscape is relatively intact with respect to natural landcover and hydrologic patterns, providing opportunities for management of large land areas.
- Protection of extensive, unfragmented forest habitat is especially important here, as large forest blocks are becoming increasingly uncommon statewide.
- Protection of high quality peatland complexes, as these are among the largest and least disturbed examples of their respective types in the state, and constitute critical habitats for many rare and/or range restricted boreal plants and animals.
- Protection of headwaters streams and their associated corridors and watersheds.
- Protection of the ecologically significant St. Croix River system.
- Increase conifer cover, forest patch size and connectivity, and older successional stages where appropriate and feasible.
- Management for large wide-ranging mammals such as timber wolf and moose.
- Maintain existing extensive areas with low road densities, which are perhaps the lowest in the state.
- Work with Minnesota to ensure continued coordinated and compatible management, and to maintain important travel and dispersal corridors between the states.
- Additional data collection is highly desirable and needed to clarify the ecological significance of this little-studied Ecological Landscape.

Natural Communities

The following table (Table 2-4) lists the natural communities occurring in the Northwest Lowlands arranged by the level of opportunity to sustain and manage the community type in this Ecological Landscape. For further explanation of natural communities and opportunities to sustain them, see Section 3.3.

Table 2-4. Natural communities occurring in the Northwest Lowlands arranged by the level of opportunity to sustain and manage the natural community type in this Ecological Landscape.

Major Opportunity	Important Opportunity	Present
Northern Wet Forest	Boreal Forest	Northern Dry Forest
Northern Sedge Meadow	Northern Dry-Mesic Forest	Northern Hardwood Swamp
Open Bog	Northern Mesic Forest	Ephemeral Pond
	Northern Wet-Mesic Forest	Shrub Carr
	Emergent Aquatic	Bedrock Glade
	Submergent Aquatic	Dry Cliff
	Alder Thicket	Moist Cliff